



A STUDY ON MEASUREMENT OF RELATIONSHIP BETWEEN THE LIQUIDITY RATIOS AND PROFITABILITY OF THE SELECTED AUTOMOBILE COMPANIES IN INDIA

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ABSTRACT

Liquidity is the prime issue for the any business concern and to manage liquidity is the crucial task for the financial manager. The present paper aims to examine the relationship between the various selected liquidity ratios and profitability of the selected Automobile Companies in India. for this purpose, the researcher has used 5 profitability ratios and 2 liquidity ratios. The result of the study revealed that ROCE, ROTA and CR has insignificant relationship with the profitability while DPR, ROE and QR significantly impact the profitability of the selected automobile companies in India.

KEY WORDS: Liquidity, Profitability, ROCE, ROTA, CR, DPR, ROE, QR.

INTRODUCTION:

Financial planning is the most crucial task among all the business plans as the finance is the back bone for any business activities and without funds no business can exist. S.C. Kuchhal has rightly said that "Money is the pivot around which all the business activities cluster". Proper financial planning helps to achieve the ultimate business goals. Financial manager has to acquire the adequate funds for the business and the requirement of funds depends on the nature and size of the business. Generally, the firm raise funds through the owner's funds and outsider's funds and invest it into either fixed or working capital. The proportion of fixed and working capital again depends upon the nature and size of the concern but whenever the company going to invest in any sort of assets, the financial manager should think about the liquidity of the investment.

Financial Liquidity plays an important role in the structure of any business entity. Finance is the life blood for any business organization and for the smooth functioning of any enterprise funds should be moved from one component to another. In simple terms liquidity means how quickly the assets or securities converted into cash without affecting its market price. Cash is the most liquid asset and all the assets and securities ultimately converted into cash. for the effective working capital management there must be an effective liquidity management. Effective liquidity management is the sign of sound financial position of a firm. High liquidity reveals that the company has strong short-term liquidity and can easily payoff the obligations of the concern as and when it incurred and vice versa.

The present study measures the relationship between the liquidity ratios and profitability of the Automobile industry as the automobile industry was the fifth largest auto market in 2020 with the selling of 3.49 million units of passenger and commercial vehicles. In 2019 it was the 7th largest commercial vehicle manufacture. Middle class group of people and young population push the demand of two-wheeler segment which dominate the market. Besides this the companies are interested towards the rural market which accelerates the growth of the sector. Government of India also promote the development of the sector and tried to take initiative for export of the production and tried to make India a leader in the automobile sector at world level in nearby future.2

REVIEW OF LITERATURE:

1. Dr. S.S Saravanan and J. Abarna (2014) made a study on "A Study on Liquidity Analysis of Selected Automobile Companies in India" to analyze the liquidity efficiency of selected automobile companies in India. The study was based on the secondary data of five years. Five companies were selected as sample companies for the analysis purpose and the sample companies were selected on the basis of their turnover. The result revealed that all the sample companies except Force Motors have to improve their liquidity and turnover for the better performance.
2. Sinha Mintibahen Bijendra and Dr. Deepika Singhvi (2017) in their research work on "Liquidity & Profitability Analysis of the Pharmaceutical Companies of India" tried to study the profitability scenario of the selected pharmaceutical companies in India for the sample period of 4 years that is from 2010-11 to 2013-14. The financial data related to the liquidity of the major pharmaceutical companies were taken for the purpose of analysis. Descriptive Statistics and ANOVA test were applied for the treatment of the data. The result revealed that the profitability position of the selected pharmaceutical companies was not satisfactory before 2009 but after than it shows a positive trend.

OBJECTIVES OF THE STUDY:

The specific and main objectives of the present study is to examine the relationship between the liquidity and profitability of the selected Automobile companies in India.

RESEARCH METHODOLOGY:

Sampling Design:

- **Sources List:** The study is based on the secondary data and the data will be collected from the secondary sources. It included the financial statement of the selected companies, magazine and other journals, articles, books and the published and unpublished documents have been considering in the research.
- **Sample Period:** The research will be carried out for the period of five years that is from 2015-16 to 2019-2020.
- **Sample Size:** The researcher selects the five leading Automobile companies of India.3
- **Tools for Analysis:** Both accounting and statistical tools were applied to study the data. Financial ratios, Descriptive Statistics, Correlation, Regression were used for the treatment of the data. Researcher has selected Net Profit Margin as the dependent variable while Return on Equity (ROE), Return on Total Assets (ROTA), Return on Capital Employed (ROCE), Dividend Pay-out Ratio (DPR), Current Ratio (CR) and Quick Ratio (QR) were taken to examine the relationship between the profitability and liquidity of the selected auto mobile companies in India.

Specification of the Model:

The following multiple- regression model has been used to test the theoretical relation between the selected dependent and independent variables of the selected automobile companies in India.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + e$$

Where Y is the profitability (NPM), X1 is the ROE, X2 is the ROCE, X3 is the ROTA, X4 is the DPR, X5 is the CR and X6 is QR, a is the constant term of the model, b is the coefficient of the model and e is the error term.

DATA ANALYSIS & INTERPRETATION:

Descriptive Statistics:

The Following table shows the descriptive statistical analysis for the dependent and independent variables.

Table 1. Descriptive Statistics

	NPM	ROE	ROCE	ROTA	DPR	CR	QR
Mean	9.50	15.54	18.56	8.58	22.66	3.08	2.89
Standard Error	1.71	3.21	2.56	1.79	3.78	1.92	1.93
Median	10.95	18.49	18.27	9.03	23.38	0.78	0.49
Mode	10.95	#N/A	#N/A	3.58	0.00	#N/A	0.43
Standard Deviation	8.55	16.03	12.82	8.94	18.90	9.62	9.66

	NPM	ROE	ROCE	ROTA	DPR	CR	QR
Sample Variance	73.14	256.81	164.43	79.84	357.23	92.51	93.39
Kurtosis	2.63	5.17	-0.02	-0.06	-1.18	24.68	24.63
Skewness	-1.29	-1.91	0.24	0.00	0.31	4.95	4.95
Range	38.96	79.06	51.18	37.02	56.05	48.61	48.81
Minimum	-16.59	-39.64	-7.18	-11.64	0.00	0.51	0.31
Maximum	22.37	39.42	44.00	25.38	56.05	49.12	49.12
Sum	237.42	388.47	464.10	214.59	566.41	77.05	72.15
Count	25.00	25.00	25.00	25.00	25.00	25.00	25.00

Table 1 above presents the descriptive statistics of the dependent and independent variables. The mean of value of Net Profit Margin (NPM) of companies taken into consideration for study during the research period amounted to 9.50. CR is the 3.08 during the same period. Standard deviation is 8.55 for NPM. It is observed that the minimum and maximum range for NPM and ROE is not significant.

Correlation Analysis:

Hypothesis:

H₀: There is no significant relationship between the selected variables.

H₁: There is no significant relationship between the selected variables.

Correlation Analysis

	NPM	ROE	ROCE	ROTA	DPR	CR	QR
NPM	1						
ROE	0.785995	1					
ROCE	0.437497	0.829801	1				
ROTA	0.438778	0.860081	0.952876	1			
DPR	0.291524	0.658104	0.821241	0.850632	1		
CR	0.353834	0.086348	-0.09008	-0.09177	-0.15316	1	
QR	0.357343	0.085821	-0.09147	-0.09405	-0.15597	0.999943	1

Pearson Correlation Analysis Shows the Following Results According to Table 2

Pearson Correlation analysis establishes relationship between 6 independent variables and one dependent variable. Correlation analysis shows that there is positive correlation between dependent variable and selected independent variables.

The analysis also shows that there seems negative correlation between the several independent variables such as ROCE and CR (Corr. = -0.09008), ROCE and QR (Corr. = -0.09147), ROTA and CR (Corr. = -0.09177) and ROTA and QR (Corr. = -0.09405) has negative correlation while there is significant correlation between DPR and CR (Corr. = .15316) and DPR and QR (Corr. = .15597).

Regression Analysis:

Table 3: Regression Statistics

Regression Statistics	
Multiple R	0.963368
R Square	0.928078
Adjusted R Square	0.904104
Standard Error	2.648416
Observations	25

ANOVA

	df	SS	MS	F	Significance F
Regression	6	1629.184	271.5306	38.71207	2.477E-09
Residual	18	126.254	7.014108		
Total	24	1755.438			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	8.27	1.83	4.51	0.00	4.42	12.12	4.42	12.12
ROE	0.73	0.07	9.75	0.00	0.57	0.89	0.57	0.89
ROCE	-0.13	0.14	-0.88	0.39	-0.43	0.18	-0.43	0.18
ROTA	-0.63	0.26	-2.41	0.03	-1.18	-0.08	-1.18	-0.08
DPR	0.10	0.06	1.68	0.11	-0.02	0.22	-0.02	0.22
CR	-24.00	5.86	-4.10	0.00	-36.31	-11.69	-36.31	-11.69
QR	24.06	5.84	4.12	0.00	11.79	36.32	11.79	36.32

Regression analysis has been conducted on dependent variable NPM and five other independent variables. Independent variables are ROE, ROCE, ROTA, DPR, CR, QR. It was observed from the Table 3 that the R-square value is 0.928078. It means that 92.81% of the dependent variable NPM is explained by independent variables. When we analyse Table 3 (Analysis of variance (ANOVA) table), it can be observed from it that F-statistics is 38.71207 which is significant at 2.477E-09. It also observed from the regression analysis in Table 3 that ROCE has a p-value of 0.39 and corresponding t-value of -0.88, ROTA has a p-value of 0.03 and corresponding t-value of -2.41 while the p-value of CR is 0.00 and corresponding t-value is -4.10. It is also observed that ROE having a p-value of 0.00 and a t-value of 9.75, DPR having a p-value of 0.11 and a t-value of 1.68 and QR having a p-value of 0.00 and t-value of 4.12.

Major Findings:

So it is concluded that ROE, ROTA, CR and QR are significant variables which creates impact on profitability of the selected automobile companies in India.

SIGNIFICANCE OF THE STUDY:

Liquidity is the parameter to measure the financial soundness. It is useful for identifying the cash position of the concern because if a company earns handsome profit doesn't mean it has sound cash position. Liquidity is important to know the capacity of the firm whether it is able to pay its obligations on time or not and hence, the present study measure the relationship between the liquidity ratios and profitability of the selected automobile companies in India.

FUTURE SCOPE OF THE STUDY:

The ability to pay-off the short-term obligation of any business organization depends on the sound liquidity position of the concern. The present study analysed the liquidity position of the sample companies still there is a scope for further research like impact of liquidity on capital structure decision, impact of liquidity on dividend decision etc....

LIMITATIONS OF THE STUDY:

1. The present study is based on the secondary data and the secondary data is the limitation itself.
2. The study is based on the financial ratios which is based on the historical cost.
3. The period of the study is of five years which is limited to analyse the liquidity aspect of any business concern.

CONCLUSION:

Liquidity is the prime issue for financial manager. It might be possible that the company having high profit margin has satisfactory liquid position. The present study examined the impact of independent variables (ROE, ROCE, ROTA, DPR, CR and QR) on the dependent variables (NPM) for the firm belonging to the automobile companies. For identifying the impact of independent variables on NPM, the statistical techniques such as Pearson's co-efficient of correlation and regression analysis in addition to descriptive statistics have been used. The study concludes that the ROCE, ROTA and CR has insignificant relationship with the profitability while DPR, ROE and QR significantly impact the profitability of the selected automobile companies in India.

REFERENCES:

- I. India Brand Equity Foundation (IBEF). "Indian Auto Mobile Industry Analysis", www.ibef.org. retrieved from https://www.ibef.org/industry/auto-mobile-presentation.
- II. Dr. S. S. Saravana et.al. "A Study on Liquidity Analysis of Selected Automobile Companies in India", Indian Journal of Applied Research, ISSN- 2249-555X, Vol.4, Issue 2, Feb 2014, Pg.no.6-8.
- III. Sinha & Singhvi, "Liquidity & Profitability Analysis of the Pharmaceutical Companies in India", International Journal of Scientific Research and Management, ISSN (e)- 2321-3418, Vol. 5, Issue 8, August 2017, Pg. No. 6717-6724.

WEBSITES:

- I. www.marutisuzuki.com
- II. www.tatamotors.com
- III. www.heroautomobile.com
- IV. www.tvsmotors.com
- V. www.bajajauto.com
- VI. www.moneycontrol.com